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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,862	02/19/2002	Max Roth	032553-021	2349

21839 7590 08/25/2005

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EXAMINER	
DUONG, THO V	
ART UNIT	**PAPER NUMBER**
3743	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/049,862	ROTH, MAX	
	Examiner	Art Unit	
	Tho v. Duong	3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-14,17-19,22,23,26 and 30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8,10-14,17-19,22,23,26 and 30* is/are rejected.

7)☒ Claim(s) *9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Receipt of applicant's amendment filed 7/25/2005 is acknowledged. Claims 8-14,17-19,22-23,26 and 30 are pending.

The indicated allowability of claims 8-14, 17-19, 22,23,26 and 30 are withdrawn in view of the newly discovered reference(s) to Kun (US 3,757,855). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (JP 356091942A). Takahashi discloses a compression-molding sheet-metal joining method for producing a heat exchanger having a flow-through chamber for a heat transfer medium, comprising providing two sheet-metal walls (4,5); shaping out indentations (6) providing reinforcing by deformation of material of at least one of the two sheet metal walls; disposing the two sheet metal walls facing one another, the indentations (6) being in contact with the other sheet to form a flow through chamber (4a); and punctuate fastening the walls to one another at a plurality of connecting points inside the indentations by compression-molding the walls together at (7) using presses (P1,P2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8,10-14,17,19,22-23 and 26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kun (US 3,757,855). Kun discloses (figures 2a, 4,4a and column 6, lines 37-47) a construction kit for a radiator cooling system comprising a plurality of heat exchangers (30); plug connectors (8) for the connection of the heat exchanger; and a tank (10), which is capable of containing hot water. The heat exchanger (21) comprising a two joined together copper walls, which has a thickness of 0.076-6.35 mm, forming a flow through chamber (32) for a heat transfer medium, the walls being joined together at a plurality of connecting points (22) inside a surface between edges of the heat exchanger, wherein the wall mesh with one another at the connecting points (Figure A). Kun further discloses that the annular denticulations are spaced apart at a distance D from 5 mm to 63 mm. The method of forming the device "punctuate fastened", "compression molded annular denticulations" and "are produced by an upsetting-pressing process and without penetration of sheet metal used to form the walls" are not germane to the issue of patentability of the device itself. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious

from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In this case, the heat exchanger in the product-by-process claim is the same as or obvious from the heat exchanger of the Kun, the claim is unpatentable even though the prior heat exchanger was made by a different process.

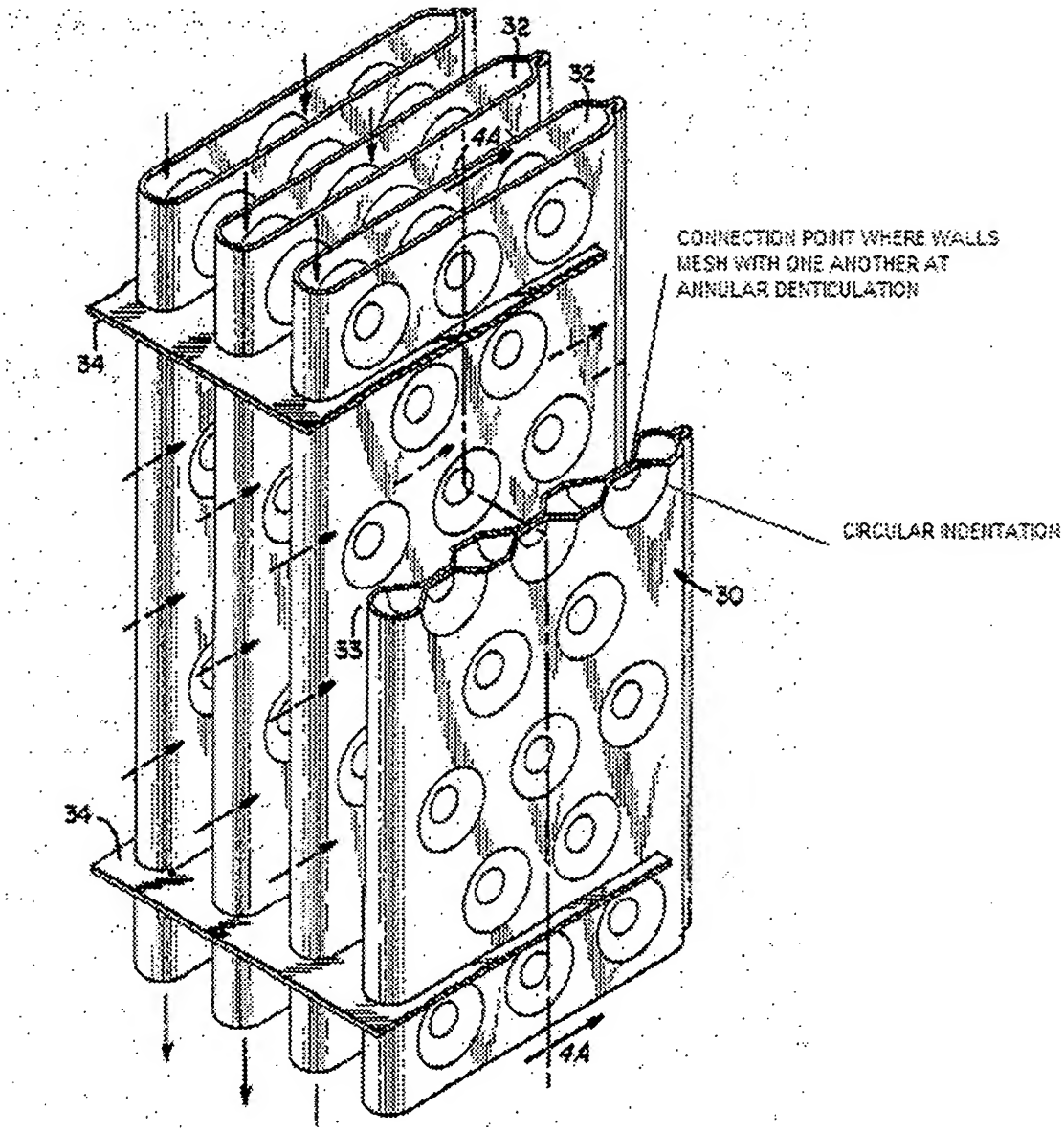

FIGURE A: THE MODIFIED FIGURE CORRESPONDES TO FIGURE 4 WITH LIMITATIONS SHOWN

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kun in view of Evans (US 4,550,694). Kun substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the radiator cooling system of a vehicle has a pump. Evan discloses (figure 1) a radiator cooling system for an engine, which has a pump (38)

for a purpose of circulating a coolant to a radiator (42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Evan's teaching in Kun's system for the purpose of circulating a coolant to a radiator.

Claims 8,10-14,17,22,23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwada et al. (US 4,997,031) in view of Kun et al. (US 3,757,855). Kashiwada discloses (figures 18-23) a heat exchanger system comprising a plurality of heat exchangers ; plug connectors (54) connecting the heat exchangers together; the heat exchanger comprising two joined together metallic walls (52) forming a flow-through chamber for a heat transfer medium, the walls being joined together at a plurality of connecting points inside a surface between the edges of the heat exchanger, wherein the wall mesh with one another at the connecting points inside the surface at annular denticulations (60) projected from the walls; wherein the denticulations are disposed inside an approximately circular indentation of the wall. Kashiwada does not disclose that the spacing between denticulations of from 10 to 50 mm or 20-30 mm and the thickness of the wall is from 0.5 to 0.65 mm. Kun discloses (figures 1,4, column 4, line 42-62 and column 6, lines 37-47) a heat exchanger (21) comprising a two joined together copper walls, which has a thickness of 0.076-6.35 mm, forming a flow through chamber (32) for a heat transfer medium, the walls being joined together by a plurality of annular denticulations, wherein the annular denticulations are spaced apart at a distance D from 5 mm to 63 mm for a purpose of minimizing the resistance of flow and able to withstand the maximum differential pressure of which the channel wall is designed in its intended environment. Since Kashiwada and Kun are both from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Kun's teaching

in Kashiwada's heat exchanger for the purpose of minimizing the resistance of flow and able to withstand the maximum differential pressure of which the channel wall is designed in its intended environment. The method of forming the device "punctuate fastened", "compression molded annular denticulations" and "are produced by an upsetting-pressing process and without penetration of sheet metal used to form the walls" are not germane to the issue of patentability of the device itself. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In this case, the heat exchanger in the product-by-process claim is the same as or obvious from the heat exchanger of the Kun, the claim is unpatentable even though the prior heat exchanger was made by a different process.

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwada and Kun as applied to claims 12 and 26 above, and further in view of Kashiwada (US 4,893,669). Kashiwada'031 and Kun substantially disclose all of applicant's claimed invention as discussed above except for the limitation that the system having a pump and a water tank. Kashiwada'669 discloses (figures 6 and 13) a heat exchanger system similar to the system of Kashiwada'031 and further disclose that system has a water tank (D) or (111) and a pump (229) for a purpose of circulating water within the system and distributing the water into the heat exchanger. Since both Kashiwada'031 and '669 are both from the same field of endeavor and/or analogous art, it would have been obvious to one having ordinary skill in the art, at the time the

invention was made to use Kashiwada'669 in Kashiwada'031 for the purpose of circulating water within the system and distributing the water into the heat exchanger.

Allowable Subject Matter

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Glorisi (US 3,774,678) discloses a cooling system with selectively replaceable radiator section.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet can be reached on 571-272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tho v Duong
Primary Examiner
Art Unit 3743

TD
August 22, 2005